1. (Original) A method in intermediate frequency and direct conversion receivers having a pre-selection filter passband, comprising:

mixing a receive signal at a mixer injection frequency outside the pre-selection filter passband,

the mixer injection frequency proportional to a first quantity divided by a second quantity,

the first quantity proportional to a difference between the receive signal frequency and an intermediate frequency, the second quantity proportional to a difference between unity and a quantity proportional to a reciprocal of a chopper divide ratio.

2. (Currently Amended) The method of Claim 1, chopping the receive signal at an input chopper before mixing, chopping the receive signal at an output chopper after mixing, the input and output choppers having a chopper frequency proportional to the mixer injection frequency divided by the chopper divide ratio.

3. (Original) The method of Claim 1, increasing a gain of the receive signal before mixing.

4. (Original) The method of Claim 1,

measuring a condition of the receive signal,

mixing the receive signal at a mixer injection frequency proportional to a difference between the desired signal frequency and an intermediate frequency if the receive signal condition is below a predetermined threshold;

mixing the receive signal at a mixer injection frequency proportional to the first quantity divided by the second quantity if the receive signal condition is above the predetermined threshold.

5. (Original) A method in intermediate frequency and direct conversion receivers having a pre-selection filter passband (BW_{PSF}), comprising:

mixing a receive signal at a mixer having a mixer injection frequency (f_{LO}) proportional to (f_{RX}-/+f_{IF})/(1-/+K_{LO}/NL),

chopping the receive signal with a chopper having a chopper frequency (f_{CHOP}) proportional to (f_{LO}/NL),

where (f_{RX}) is a frequency of the receive signal, (f_{IF}) is an intermediate frequency of the receiver, NL is a divide ratio of the chopper, (K_{LO}) is a VCO proportionality constant divide ratio.

6. (Original) The method of Claim 5, selecting the mixer injection frequency (f_{LO}) so that an absolute value of (f_{RX}-f_{LO}) is greater than the preselection filter passband (BW_{PSF}).

7. (Original) The method of Claim 5, selecting the mixer injection frequency (f_{LO}) so that a VCO frequency, f_{VCO}, is outside a bandwidth of receive signal harmonics.

8. (Original) The method of Claim 5,

measuring a strength of the receive signal,

mixing the receive signal at the mixer having the mixer injection frequency (f_{LO}) proportional to $(f_{RX}-/+f_{IF})/(1-/+ K_{LO}/NL)$ when the receive signal strength is above a predetermined threshold;

mixing the receive signal at a mixer having a mixer injection frequency (f_{LO}) proportional to $(f_{RX}-/+f_{IF})$ when the receive signal strength is below the predetermined threshold.

9. (Original) The method of Claim 8, chopping the receive signal at an input chopper before mixing, chopping the receive signal at an output chopper after mixing, the input and output choppers having a chopper frequency (f_{CHOP}) proportional to the mixer injection frequency divided by the chopper divide ratio (f_{LO}/NL).

10. (Original) The method of Claim 8, increasing a gain of the receive signal before mixing if the receive signal gain is below a threshold.

11. (Original) A method in intermediate frequency and direct conversion receivers, comprising:

receiving a signal;

providing a mixer injection frequency by dividing a voltage controlled oscillator output by a frequency divide ratio,

the voltage controlled oscillator having a frequency outside a bandwidth of received signal harmonics.

12. (Currently Amended) The method of Claim 11,

mixing the received signal at the mixer injection frequency,

the mixer injection frequency proportional to a first quantity divided by a second quantity, the first quantity proportional to a difference between the received signal frequency and an intermediate frequency, the second quantity proportional to a difference between unity and a quantity proportional to a reciprocal of a chopper divide ratio;

chopping the [~~receive~~] received signal at a chopper frequency proportional to the mixer injection frequency divided by the chopper divide ratio.

13. (Original) The method of Claim 11, the frequency divide ratio is q = 1, mixing the received signal at a mixer injection frequency outside a bandwidth of a fundamental frequency of the received signal.

14. (Original) The method of Claim 11, the frequency divide ratio is $q > 1$, mixing the received signal at a mixer injection frequency derived from a VCO frequency that is outside a bandwidth of the n^{th} harmonic of the received signal, where the frequency divide ratio q equals the harmonic number n.

15. (Original) The method of Claim 11,

determining a condition of the received signal;

mixing the received signal at the mixer injection frequency derived from a VCO frequency that is outside the bandwidth of the harmonics of the received signal only if the condition of the received signal is above a threshold.

16. (Original) The method of Claim 15, determining the condition of the received signal by determining a strength thereof.

17. (Currently Amended) The method of Claim 15, determining the condition of the received signal by determining a signal strength and bit error rate (BER) thereof, increasing a gain of the received signal before mixing if the gain of the [~~receive~~] <u>received</u> signal is below a gain threshold

18. (Original) The method of Claim 11, mixing the received signal at a mixer injection frequency outside a channel bandwidth of the received signal.

19. (Original) A method in an RF receiver, comprising:

receiving a signal within a passband of a pre-selection filter of the receiver;

mixing the received signal at a mixer injection frequency outside the passband of the pre-selection filter;

chopping the received signal before and after mixing at the same chopper frequency,

the chopper frequency proportional to the mixer injection frequency.

20. (Original) The method of Claim 19, increasing a gain of the received signal before mixing if the received signal gain is below a threshold.

21. (Original) The method of Claim 19, determining a gain of the received signal, mixing the received signal at the mixer injection frequency outside the passband of the pre-selection filter when the measured gain is above a threshold, mixing the received signal at a mixer injection frequency within the passband of the pre-selection filter if the measured gain is below the threshold.

22. (Original) A method in intermediate frequency and direct conversion receivers, comprising:

chopping a received signal;

mixing the received signal after chopping at a mixer injection frequency;

deriving the mixer injection frequency from a voltage controlled oscillator signal frequency outside a bandwidth of received signal harmonics.

23. (Currently Amended) The method of Claim 22,

providing the mixer injection frequency derived from a VCO frequency that is outside a bandwidth of the harmonics of the received signal by dividing a voltage controlled oscillator output by a frequency divide ratio,

a [~~the~~] harmonic of the received signal corresponding to the divide ratio of the frequency divider.

24. (New) A method in intermediate frequency and direct conversion receivers, comprising:

receiving a signal at a receive frequency;

providing a mixer injection frequency at a frequency different than the receive frequency by dividing a voltage controlled oscillator output by a frequency divide ratio,

the voltage controlled oscillator having a frequency outside a bandwidth of received signal harmonics.

25. (New) A method in an RF receiver, the method comprising:

receiving a signal within a passband of a pre-selection filter of the receiver;

mixing the received signal at a mixer injection frequency outside the passband of the pre-selection filter;

chopping the received signal at a chopper frequency proportional to the mixer injection frequency.